

Silicon Vertex Software

Status and Plans

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<http://www.phenix.bnl.gov/phenix/WWW/upgrades/silicon/software>

What plans we had about a year ago

Start data taking	end of 2009
Mock Data Challenge	early 2009
Online monitoring	2009
Calibration and alignment tools	late 2008
Data decoding	late 2008
Clustering algorithm	early 2008
More realistic detector response	late 2007
Database (calibration)	late 2007
Database (hardware/software)	mid 2007
Test-bench database	late 2006
Event display	early 2007
Standalone tracking	late 2006
Simulation efforts	ongoing
Code optimization and improvement	ongoing

What we had about a year ago - Manpower

3 Grad Students:	Alan Dion (SUNYSB) 25%
	Ermias Tujuba (Ecole Polytechnique) 25%
	Hua Pei (ISU) 25%
1 Postdoc:	Patricia Liebing (RBRC) 25%
2 Staff:	Alexandre Lebedev (ISU) 50%
	Hubert Van Hecke (LANL) 25%
Total	~1.75 FTE

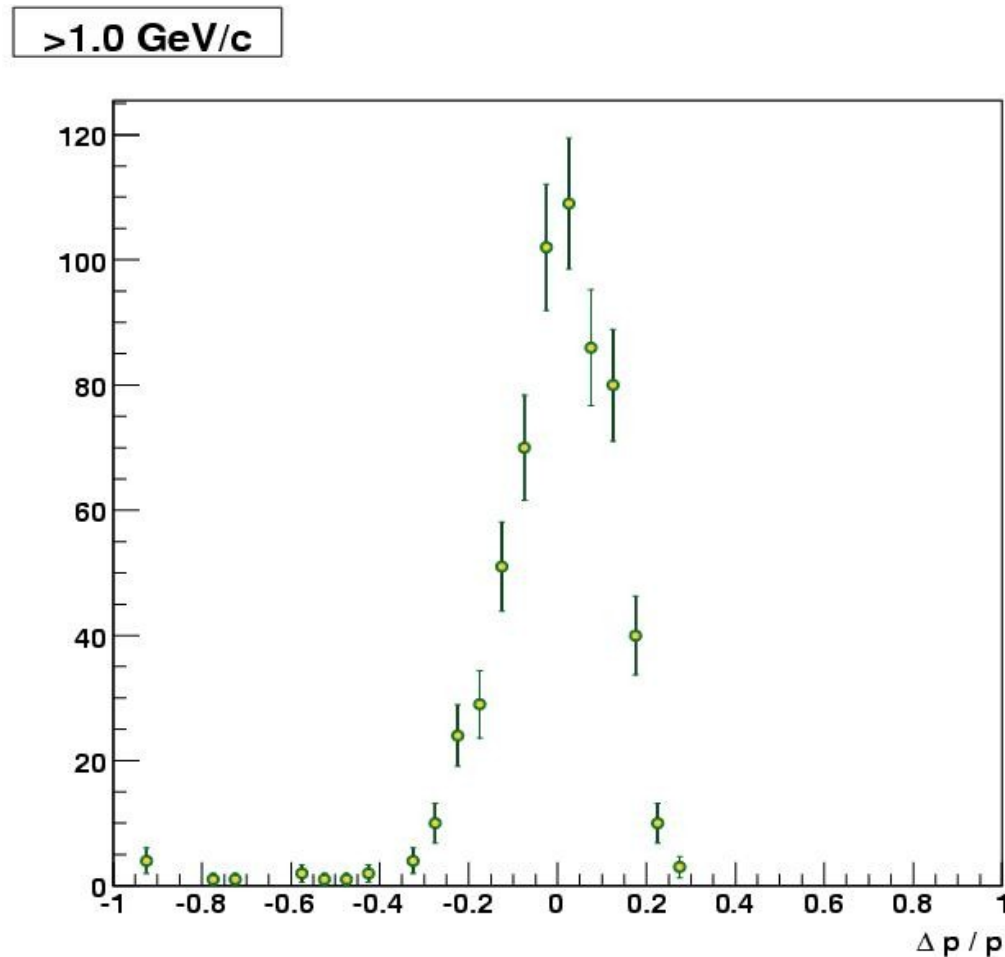
Most of them are not working on VTX software anymore.

Some additional manpower:

1 postdoc:	Maki Kurosawa, RIKEN
1 undergrad:	Andrew Bergstrom, ISU

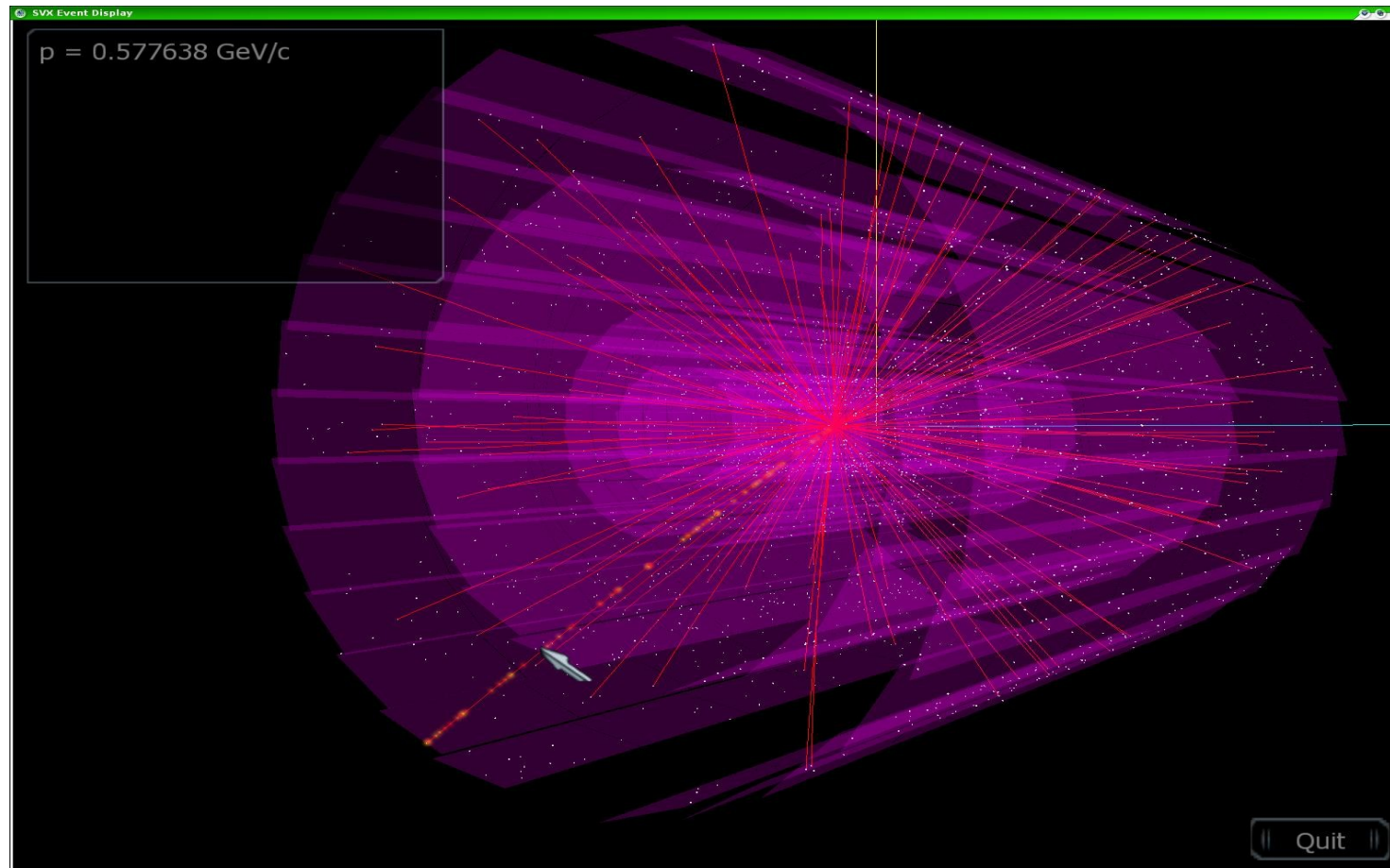
Standalone tracking

Ready, but needs to be integrated into Phenix software.
This is a relatively easy task (?) (Alan?).



VTX event display

Ready, but needs to be incorporated into Phenix software
The code is based on OpenGL. Could be more difficult to integrate than standalone tracking (Alan?).



Database

- Work started, some simulation stuff is already in the database,
- Tools for reading/writing exist,
- Examples of classes exist,
- Need manpower to implement classes for calibration, alignment, hardware/software map, etc.

Test-bench database to hold information about tests, assembly, etc.
Based on PostgreSQL, just like the PHENIX database
More human-friendly web interface

More realistic detector response, Clustering algorithm

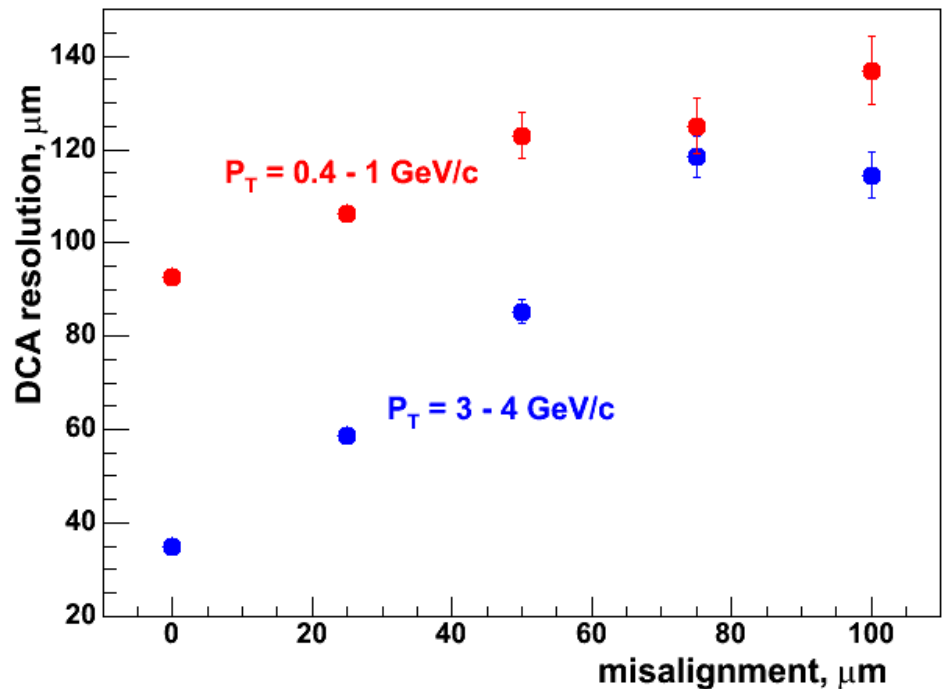
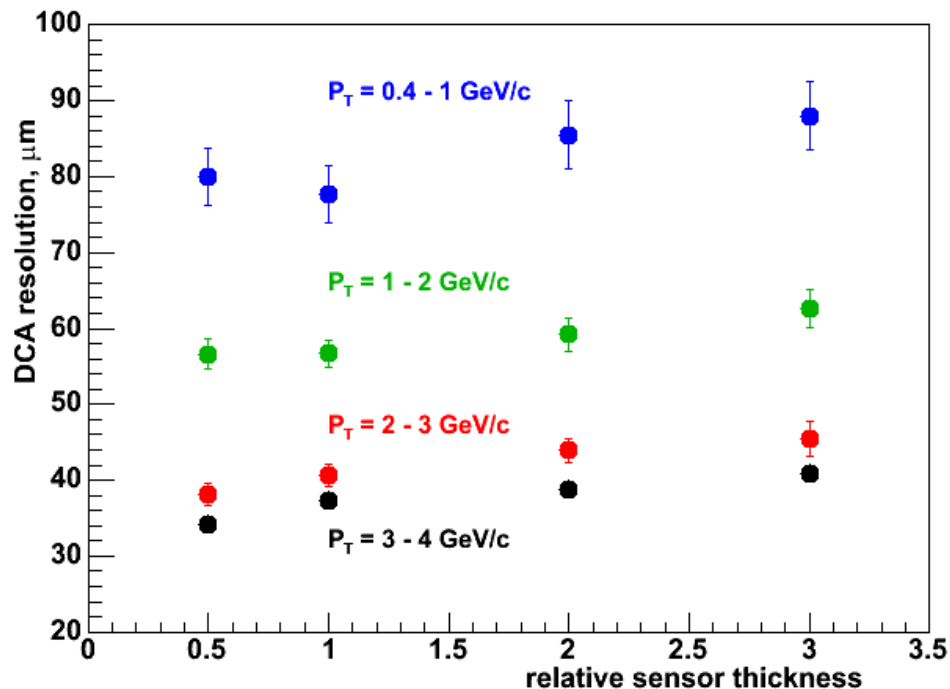
No progress. Need manpower

Some other progress

Staggered geometry, more realistic amount of material in pisa.

Possibility to introduce misalignments on ladder level in pisa.

Simulation studies of DCA resolution vs sensor thickness and misalignment.



Conclusions

We need more manpower!